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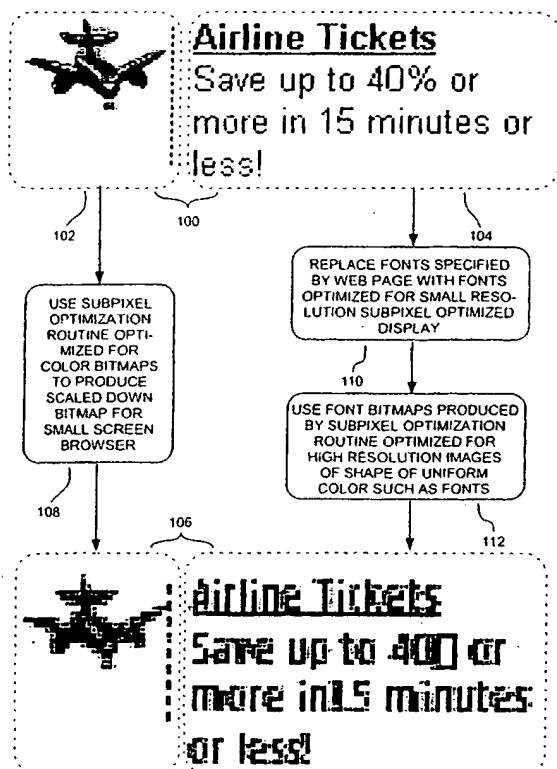
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[Continued on next page]

(54) Title: METHODS, SYSTEMS, AND PROGRAMMING FOR PRODUCING AND DISPLAYING SUBPIXEL-OPTIMIZED FONT BITMAPS USING NON-LINEAR COLOR BALANCING



(57) Abstract: A method of producing a sub pixel resolution representation of a shape suitable for display on a sub pixel addressed screen. The method comprises producing a scaled sub pixel optimized image of a bitmap image by associating a luminosity value with each sub pixel of the scaled image as a function of the percent of the area of the sub pixel's area in the image that is covered by the shape and a color balancing function designed to distribute a portion of a sub pixel's luminosity value that otherwise would cause color imbalance to nearby sub pixels of different colors. The percent of a sub pixel's luminosity values that is so distributed is a function of the percent of the sub pixel's luminosity value, which causes color imbalance. An advantage is that it reduces the amount of luminosity value distributed for color balance purposes to approximately only that amount which is necessary to achieve color balance, and increases the clarity of sub pixel optimized images.

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## INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : G09G 5/00,5/38,5/06

US CL : 345/613

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 345/613, 619, 660

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
The raster tragedy at low resolution, Beat Stamm, Presentation at the training sessionElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
IEEE**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,339,426 B1 (LUI et al) 15 January 2002 (15.01.2002), column 4, lines 15-24; column 17, lines 1-7; column 10, see fig. 7; column 11, lines 10-27; Fig. 1; Fig. 2; Fig. 9; Fig. 6; column 3, lines 59-67; column 17, lines 15-55; column 3, line 40-58; column 15, lines 5-15; column 4, lines 15-24.	1-6; 8-13; 15-21; 23-38; 41-45
X	The raster tragedy at low resolution, Beat Stamm, 29 October 1997 (29.10.1997), Page 4; Page 2, Fig. 2.	7,13-14,22,39,40



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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